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Remarks

Claims 1-57 were pending in the application. New claim 58 is added hereby. Therefore, claims 1-58 are now pending in the application.

The Office Action is a restriction requirement, requesting applicants to choose between 8 allegedly patentably distinct species.

To the extent an election must be made, and is even possible, applicant elects species 1 corresponding to FIG. 1 and FIG. 6, which includes originally filed claims 1-37, 53, 54, and 57 as well as newly added claim 58.

Notwithstanding the foregoing election, this restriction requirement is respectfully traversed for the following reasons.

Firstly, the fact that the applicant discloses different embodiments for implementing the invention does not make the embodiments species that are independent or distinct. Rather, as with the instant application, it is often the case that a single independent claim is generic and covers all of the embodiments disclosed in an application. Furthermore, when a single independent claim does not cover all of the embodiments disclosed in an application, this does not mean that there is more than one inventive concept in an application. Rather, one independent claim may, for example, be directed to a transmitter, and a second to the receiver, as is the case in the instant application.

More specifically, the alleged species of the Office Action are simply variations of a transmitter for digitally watermarking a video signal (those alleged species including FIGs. 1 and 9) and a receiver for recovering the additional data of a video signal containing such digital watermarking on the chrominance signal thereof (those alleged species including FIGs. 2 and 10).

In addition, it is noted that, 37 CFR 1.146, election of species recites:

In the first action on an application containing a generic claim to a generic invention (genus) and claims to more than one patentably distinct species embraced thereby, the examiner may require the applicant in the reply to that action to elect a species of his or her invention to which his or her claim will be restricted if no claim to the genus is found to be allowable.

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In this regard, MPEP 806.04(h) states that in making a requirement for restriction in an application claiming plural species, the examiner should group together the claims for species that are considered clearly unpatentable over each other. This does not appear to have been done in the instant restriction requirement, because if it had been done both alleged species, i.e., the embodiments disclosed in FIGs. 6 and 8, would have been grouped together, because they are each unpatentable over the other. Perhaps telling in this regard is the fact that there are no claims that are separately directed to the embodiment of FIG. 6, nor are there any claims that are separately directed to the embodiment of FIG. 8.

It is noted too that the specification states:

In order to further reduce the storage requirements in the embodiment of FIG. 8, as compared to the embodiment of FIG. 6, in accordance with an aspect of the invention, not only is the YUV colorspace divided into regions, each region including positions corresponding to at least one set of Y, U, and V values, with each region being assigned a chrominance portion, e.g., based on experimental observations, that is to be selected for any pixel whose Y, U, and V values fall within the region, as described in connection with FIG. 6, but any pixel that has a U value less than a predefined value, e.g., one-half the maximum value, has the U chrominance portion selected for watermarking. Thus, for 8 bit Y, U, and V, values, if the value of U is less than 128, the U chrominance portion is always selected for watermarking regardless of the values of V or Y.

By having the most significant address bits of the chrominance portion selection table correspond to the U-value-derived bits of the address, advantageously, the size of the table can be reduced by up to one half. This is achieved by adding a test to determine if the U value is less than one half the maximum value prior to forming the table address, and if the test result is YES, simply indicating to select the U chrominance portion and skipping the rest of the process of accessing the table, and also by subtracting one half the maximum U value from the actual U value prior to calculating the U-value-derived bits of the address. Thus, the section of the table employed for FIG. 6 corresponding to the most significant U bit being 0 is eliminated, and only that portion of the table where the most significant U bit is 1 is retained. However, the indexing into the remaining portion of the table is shifted by the subtraction from the U value of the one half of the maximum U value prior to forming the U-value-derived bits.

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Clearly then, the method of FIG. 8 is essentially the method of FIG.6 but only applied to part of the colorspace, with the selection for the other part of the colorspace simply having U selected for it. Thus, FIGs. 6 and 8 are not independent or patentably distinct.

Also, species may be either independent or related under a particular disclosure. Where species under a claimed genus are not connected in any of design, operation, or effect under the disclosure, the species are independent inventions. (See MPEP 802.01 and 806.06.) Conversely, where species under a claimed genus are connected in any of design, operation, or effect under the disclosure, the species are not independent inventions. Thus, as noted above, contrary to the implication of the Office Action, different ways of implementing the same inventive concept do not necessarily amount to different inventions. Furthermore, where inventions as disclosed and claimed are both a) species under a claimed genus and b) related, then the question of restriction must be determined by both the practice applicable to election of species and the practice applicable to other types of restrictions. If restriction is improper under either practice, it should not be required. In the instant application, it is presently believed that there is only a single invention, and most certainly, the alleged species are related, e.g., by a transmitter and corresponding receiver relationship.

More specifically, in the instant case, it is clear that restriction is improper, because the species are related, and, notwithstanding applicant's attempt at an election, election is actually impossible to perform. This is because, given the currently pending claims, the only originally presented claims that specifically relates to the subject matter of FIGs. 6 and 8 are dependent claims 24 and 42. However, claim 24 which states,

wherein said color selection unit comprises a prestored table in computer readable form that indicates for each area within at least a colorspace portion which chrominance portion should be selected for pixels within said each area

and claim 42, which states

wherein said determination in said making step is made for at least one pixel of said block as a function of a prestored table in computer readable form that indicates for each area within at least a

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colorspace portion which chrominance portion should be selected
for pixels within said each area

each covers both the embodiments of FIGs. 6 and 8, because both require the use of such a table. Thus, claims 24 and 42 are generic with respect to FIGs. 6 and 8, and they merely distinguish a) such a table-based method from b) other possible methods of determining which chrominance portion should be selected, such as by computation using a formula. The remaining originally presented claims as presently drafted don't care how the chrominance portion is selected, so long as one is selected, because they don't specify how to select one, only that one is selected. They are all thus generic with respect to FIGs. 6 and 8.

Lastly, new independent claim 58 has been added, which, as a system claim including both a transmitter and a receiver, links a) the embodiment of FIG. 1 with one of the embodiments of Figs. 2 and 10 or b) the embodiment of FIG. 9 with one of the embodiments of Figs. 2 and 10. Furthermore, by requiring at least one of the color selection unit and the color selector to have a prestored table in computer readable form that indicates for each area within at least a colorspace portion which chrominance portion should be selected for pixels within each area, the embodiments of FIGs. 6 and 8 are both covered and linked thereby to Figs. 1, 2, 9, and 10. Thus, all the embodiments are linked together and no new matter has been added. Thus, there even if there was a basis for the restriction requirement before—which applicant maintains there was not—introduction of claim 58 removes such alleged basis.

Moreover, since a search will have to be done for all the elements of claim 58, which was elected as part of group 1, there is no additional search burden relating to examining each of the independent claims.

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Conclusion

It is respectfully submitted that the Office (original) Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

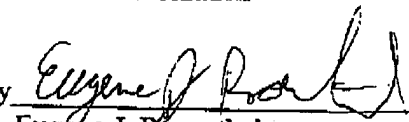
If, however, the Examiner still believes that there are unresolved issues, he is invited to call applicant's attorney so that arrangements may be made to discuss and resolve any such issues.

In the event that an extension of time is required for this amendment to be considered timely, and a petition therefor does not otherwise accompany this amendment, any necessary extension of time is hereby petitioned for, and the Commissioner is authorized to charge the appropriate cost of such petition to the **Lucent Technologies Deposit (original) Account No. 12-2325**.

Respectfully,

M. H. Zarrabizadeh

By



Eugene J. Rosenthal

Attorney

Reg. No. 36,658

908-582-4323

Lucent Technologies Inc.

Date:

Jan. 15, 2009